FACT SHEET

BMDO FACT SHEET 203-00-11 Replaces Fact Sheet 203-00-11

PATRIOT ADVANCED CAPABILITY-3

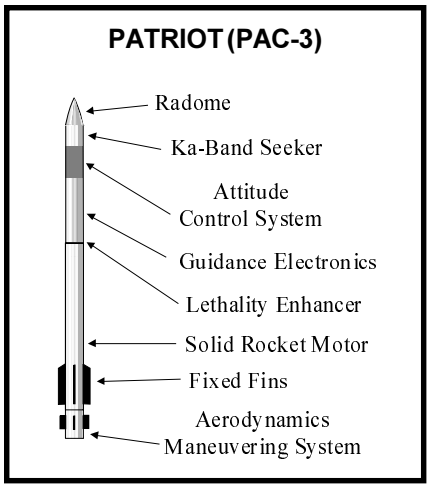
BACKGROUND

During the Gulf War, the PATRIOT air defense system made its now-famous battlefield debut against tacticaL ballistic missiles. However, the system originated years before it ever saw action in the Persian Gulf. In fact, the first PATRIOT was deployed in 1985. Initially, PATRIOT focused on air defense rather than missile defense, but the changing battlefield and the increasing threat from ballistic missiles spurred PATRIOT through a succession of improvements and modifications to refocus its mission on missile defense. This foresight paid off during the Gulf War, when the PATRIOT helped defend coalition forces and Israeli territory against Iraqi Scud missile attacks.

Today, the effort to improve the PATRIOT system and its ballistic missile defense capabilities continues as the latest version, called the PATRIOT Advanced Capability-3 (PAC-3), nears completion. The series of enhancements planned for PAC-3 will preserve its position as one of the fundamental ballistic missile defense systems in the U.S. arsenal.

MISSION

PATRIOT has always been an important part of our air and missile defense. However, in recent years the PATRIOT system has become even more integral to our theater missile defense (TMD) plan. Today it is considered to be a core TMD program with one of the highest priorities in the development of ballistic missile defense (BMD) systems. PAC-3's mission is to be part of the lower tier of the BMD architecture. This includes defending troops and fixed assets from short and medium range ballistic missiles, cruise missiles, and other air breathing threats such as fixed or rotary wing aircraft.



To accomplish this mission, the PAC-3 system is designed to be a highly advanced missile defense system that can destroy enemy threats with hit-to-kill accuracy in the terminal phase of the threat missile's flight. The PAC-3 system is planned to be interoperable with other Army and Joint systems, to provide a seamless missile defense in depth, and be air-transportable to support rapid deployments.

PROGRAM DEVELOPMENT & SCHEDULE

PAC-3 development will follow a series of evolutionary steps through three increasingly sophisticated versions of the PATRIOT system, called Configuration 1, Configuration 2, and Configuration 3. The first unit to be equipped with Configuration 3 is scheduled for 2001.

The first step was the development of the PATRIOT Quick Response Program (QRP) and its deployment in 1993. An intermediate system, QRP came out as a direct response to the Gulf War and the increasing danger of missile proliferation. Based on experiences from the Gulf War , the QRP had better sensing equipment and a remote launch capability.

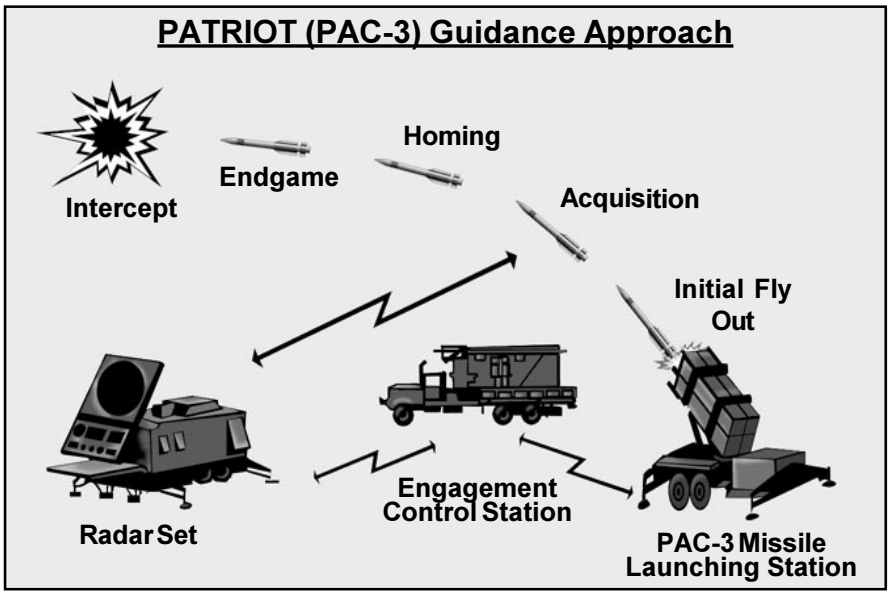
PAC-3 Configuration 1 is the first true PAC-3 system. It fields a number of improvements, especially in battle management, command, control, communications and intelligence (BMC^3I) and incorporates the Guidance Enhancement Missile (GEM). The first unit was equipped with Configuration 1 in December 1995.

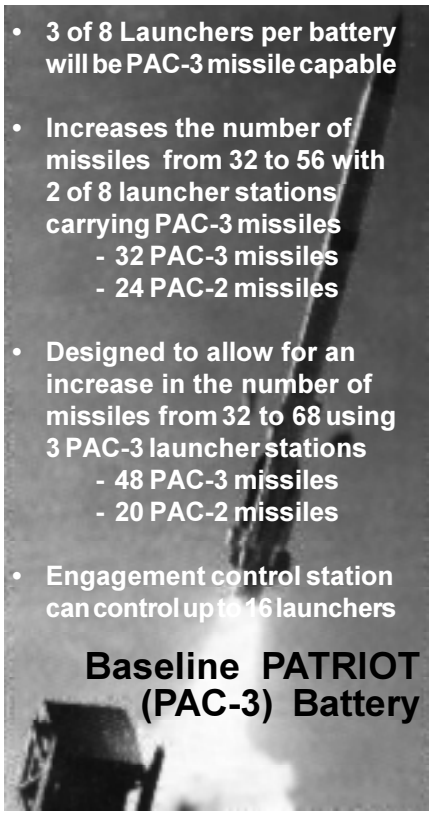
In 1998 the Army completed fielding of the PAC-3 Configuration 2, which uses both PAC-2 and GEM interceptors. The Configuration 2 features further improvements and modifications to the radar, communications, and other systems. In 2001, the process will continue with the deployment of PAC-3 Configuration 3. This highly-advanced system will be the first to feature the new PAC-3 missile.

The PAC-3 missile is a smaller interceptor which results in increased firepower and

improved lethality. It uses kinetic energy rather than an explosive warhead to destroy its ballistic missile targets. The new interceptors, when combined with an enhanced radar, improved survivability, and a launch point determination capability, will allow the PATRIOT air and missile defense system to increase battlespace and range. BMDO and the Army began flight tests of the PAC-3 missile in 1997.

The PAC-3 missile has successfully completed eight flight tests. The first two PAC-3 developmental test (DT) missions did not involved targets but were structured to verify critical systems and missile performance prior to conducting target intercept flight tests. A seeker characterization flight (SCF) mission was conducted March 15, 1999, to test a PAC-3 missile with a seeker. Although not a primary objective of the SCF, an intercept of the target was achieved. On September 16, 1999, a second intercept test was successful. DT-5, conducted February 5, 2000, was a successful intercept of a Hera ballistic missile target. DT-7, conducted July 22, 2000, was a successful intercept of an MQM-107 drone representing a cruise missile. Another MQM-107 was intercepted July 28, 2000 during a test not included in the developmental test program. A PAC-3 missile intercepted and destroyed the ballistic missile target on October 14, 2000. That test involved a simultaneous engagement using a PAC-3 and a PAC-2 missile and two targets. Test objectives included demonstrating system capability to engage and destroy a maneuvering tactical ballistic missile reentry vehicle with a PAC-3 missile and a sub-scale air-breathing target with a PAC-2 missile; and to demonstrate PAC-3 seeker acquisition and tracking of a target with a second object present in the seeker field of view. The remaining PAC-3 tests will involve PAC-3 missiles intercepting various classes of targets.





PAC-3 Missile Characteristics

Weight:	321.0 kg/ 707.6 lbs
Length:	5.2 m/ 17.0 ft
Diameter:	255.0 mm/ 10.0 in

SYSTEM DESCRIPTION

All PAC-3 systems have four basic components: a radar set, an engagement control station (ECS), a launching station, and interceptors.

The radar station provides warning and tracking of incoming threats. It also provides a continuous update link with in-flight interceptors. The ECS computes fire solutions for the interceptor, provides fire control and a communications link with other PATRIOT units. The ECS is the central nervous system of PAC-3 Fire Unit operations. The launch stations transports, protects, and launches the missiles. Each launch station can be equipped with four GEM or earlier missiles or selected launchers will carry 16 PAC-3 missiles. The PAC-3 missile itself uses its high maneuverability and hit-to-kill accuracy to destroy its target in a catastrophic collision.

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